

## **REMARKS**

In response to the above-identified Final Office Action (“Action”), Applicants submit the following remarks and seek reconsideration thereof. Claims 1-3 are pending in the present application. Claims 1-3 are rejected. In the instant response, claim 1 is amended, claim 3 is cancelled and no claims are added.

### **I.      Claim Amendments**

Applicants respectfully submit herewith amendments to claim 1. Claim 3 is cancelled. Claim 1 is amended to incorporate the limitations of now cancelled claim 3. Claim 1 is further amended to recite that when a control signal of a first level is generated from a gain controller a transistor of the impedance control unit is turned on to decrease a trans-impedance of the pre-amplifier and when a control signal of a second level is generated from a gain controller the transistor is turned off to increase the trans-impedance of the pre-amplifier. Support for the amendments to claim 1 may be found, for example, on page 7, lines 8-21 of the Application.

Applicants respectfully submit the amendments do not add new matter and are supported by the specification. Accordingly, Applicants respectfully request consideration and entry of the amendments to claim 1.

### **II.     Claim Rejections Under 35 U.S.C. §103**

A. In the Action, claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,565,974 issued to Smoot (“Smoot”) in view of U.S. Patent No. 5,475,342 issued to Nakamura et al. (“Nakamura”) and further in view of French Publication No. 2532802 issued to Jarret et al. (“Jarret”). Applicants respectfully traverse the rejections as follows.

To establish a *prima facie* case of obviousness, the Examiner must set forth “some articulated reasoning with some rational underpinning to support the conclusion of obviousness.” See KSR International Co. v. Teleflex Inc., 82 USPQ2d 1385, 1396 (2007). In combining prior art elements to render the claimed combination of elements obvious, the Examiner must show that the results would have been predictable to one of ordinary skill in the art. See Examination

*Guidelines for Determining Obviousness Under 35 U.S.C. 103*, Section III(D), issued by the U.S. Patent and Trademark Office on October 10, 2007.

In regard to independent claim 1, Applicants respectfully submit Smoot, Nakamura and Jarret fail to disclose at least the elements of “the pre-amplifier comprising an impedance control unit which controls an impedance of the pre-amplifier in response to the control signal and an amplifying unit which converts the current signal into the voltage signal and amplifies the voltage signal with a gain corresponding to said impedance controlled by the impedance control unit such that when a control signal of a first level is generated from a gain controller a transistor of the impedance control unit is turned on to decrease a trans-impedance of the pre-amplifier and when a control signal of a second level is generated from the gain controller the transistor is turned off to increase the trans-impedance of the pre-amplifier.”

In the Action, the Examiner admits that Smoot, Nakamura and Jarret fail to disclose the structure and method of how the gain of the variable amplifier can be changed. See Action, page 6. In the absence of such a disclosure, amended claim 1 and its dependent claim 2 are not *prima facie* obvious in view of Smoot, Nakamura and Jarret. Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1 and 2 under 35 U.S.C. §103 over Smoot, Nakamura and Jarret.

Applicants further note that U.S. Patent No. 5,602,510 issued to Bayruns et al. (“Bayruns”) fails to disclose these elements. The Examiner generally alleges that Bayruns discloses the elements of claim 3. Bayruns generally discloses an automatic trans-impedance control amplifier which includes an automatic gain control circuit to adjust the value of the trans-impedance and voltage gain of the amplifier according to the input current. Upon review of Bayruns, however, Applicants are unable to discern a portion of the reference disclosing that a transistor of the impedance control unit is turned on upon receiving a first level control signal to decrease the trans-impedance and turned off upon receiving a second level control signal to increase the trans-impedance.

**B.** In the Action, claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Smoot in view of Nakamura and further in view of Jarret and further in view of Bayruns. Applicants respectfully traverse the rejections as follows.

Claim 3 is cancelled therefore the rejection on this basis is moot.

## **CONCLUSION**

In view of the foregoing, it is believed that all claims now pending, namely claims 1-2, patentably define the subject invention over the prior art of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes that a telephone conference would be useful in moving the application forward to allowance, the Examiner is encouraged to contact the undersigned at (310) 207 3800.

## **PETITION FOR EXTENSION OF TIME**

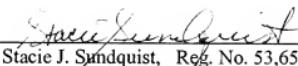
Per 37 C.F.R. 1.136(a) and in connection with the Office Action mailed on JANUARY 29, 2008, Applicants respectfully petition Commissioner for a one (1) month extension of time, extending the period for response to MAY 29, 2008. The amount of \$60.00 to cover the petition filing fee for a 37 C.F.R. 1.17(a)(1) small entity will be charged to our Deposit Account No. 02-2666.

Respectfully submitted,

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Dated: May 29, 2008

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### **CERTIFICATE OF TRANSMISSION**

I hereby certify that this correspondence is being submitted electronically via EFS Web to the United States Patent and Trademark Office on May 29, 2008.

  
Si Vuong